REMARKS

This Amendment is in response to the Office Action dated November 24, 2009. Claims 15-20 have been added. The new claims are supported throughout the specification, for example, see FIGS. 2 and 3 and the text of the published application at paragraphs 0012-0015, 0040, 0041, 0046 (explaining that during the compression stroke the motor speed varies to maintain a constant pump speed); paragraphs 0021, 0022, 0042, 0044 (explaining that during aspiration the motor can be driven at its maximum speed resulting in variation in the ram speed); paragraphs 0026, 0027, 0035, 0037 (describing cam position sensors and rotor position sensors).

No new matter has been added. Applicants reserve the right to prosecute the same or similar claims in the present or another patent application. The amendments made are not related to any issues of patentability. Applicants submit that the pending claims are in condition for allowance.

Rejections under 35 U.S.C. § 112

Claims 7, 12 and 13 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. This rejection is traversed.

The Office Action states that the following step recited in claim 13 and incorporated by dependent claims 7 and 12 is not described: "calculating a currently required rotating speed for the motor based upon the input of the required quantity of the metered medium and the current position of the rotating cam, *only if* the current position of the rotating cam corresponds to the compression stroke of the metering cycle."

At least paragraphs 0042 and 0044 of the published application describe an embodiment wherein the speed of the motor is controlled (i.e., wherein the motor is at least sometime operated at less than its maximum speed) only during the compression stroke. In the described embodiment the motor runs at its maximum speed during the aspiration stroke to minimize the duration of the aspiration stroke notwithstanding the required quantity of the metered medium or

the position of the rotating cam. Accordingly, the feature of claim 13, which is incorporated in 7 and 12 is described as required by § 112, first paragraph.

Claims 7, 12, and 13 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. This rejection is traversed.

The Office Action states that the following step recited in claim 13 and incorporated by dependent claims 7 and 12 is indefinite: "providing input of a required quantity of a metered medium to a positional controller that is coupled to a controller of the electric motor, the required quantity being that to be delivered during the compression stroke of the metering cycle."

The Office Action states that the "required quantity" refers to a fix quantity and is therefore not meaningful to the calculation step. In view of the context of the claim and the specification, the required quantity in fact refers to how much and/or how fast the fluid needs to be pumped, which is not a fixed quantity. See paragraphs 0001 and 0002 of the published application. The amount or speed of the desired fluid is a variable has an effect to the speed of the motor, accordingly claims 7, 12, and 13 are not indefinite.

Rejections under 35 U.S.C. § 103

Claims 7, 12 and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Haberlander et al. (US 6457944) in view of Moddemann (US 2002/0067148). This rejection is traversed.

Claim 13 is directed to a method for controlling a metering cycle of a pump, comprising, among other steps, the step of adjusting a rotating field inside the motor to reach the calculated currently required rotating speed, the adjusting being carried out by the controller of the motor during the compression stroke of the metering cycle. None of the cited references disclose or suggest the above claim step (i.e., varying the motor speed during a compression stroke of a pump).

Haberlander et al. merely discloses running a motor faster during aspiration than during compression. Haberlander et al. is equivalent to DE 198 23 156, which is referenced in context in the background of the present application. As discussed in paragraph 0010 of the published application, the disclosure of Haberlander et al. is directed to an asynchronous motors, which have very different characteristic than an EC motors (e.g. asynchronous motors are load dependent), and therefore is not applicable to the new pump method disclosed in the present application. The new pump method involves varying the speed of a motor during the compression stroke to maintain a substantially constant flow rate (as described in the specification, flow rate is proportional to ram speed).

Moddemann fails to cure the defects of Haberlander et al. Moddemann does not disclose varying the speed of a motor during a compression stroke of a pump, it simply discloses a motor. Therefore, even if Moddemann and Haberlander et al. were combined, the combination would not include all of the features of claim 13.

In addition, one of ordinary skill in the art would not combine Haberlander et al. with the motor of Moddemann, as the Haberlander et al. disclosure is entirely directed to a system and method applicable to the use of asynchronous motor based dosing pumps. For example, see Haberlander et al. "Field of Invention" and "Abstract" sections explaining that the disclosure relates to asynchronous motor driven pumps. Given that the disclosure in Haberlander et al. is clearly specific to asynchronous motors, one of ordinary skill in the art would not try to substitute another very different type of motor (e.g., EC motor) in place of the asynchronous motor in Haberlander et al.

Claims 7 and 12 depend on and further limit claim 13; therefore, they are patentable for at least the same reasons discussed above.

New Claims

The new claims are patentable for at least some of the same reasons discussed above. For example, new independent claim 15 is directed to a method for controlling a ram actuated pump comprising: varying a rotational speed of the commuted motor to maintain a substantially constant linear speed of the ram during a compression stroke. As discussed above, the cited reference fails to disclose or suggest this step. Haberlander et al. simply discloses a system wherein the motor operates faster during aspiration than during compression. There is no disclosure of varying the speed of the motor during the compression cycle to maintain a constant linear ram speed.

Conclusion

In view of the above amendments and remarks, Applicants respectfully request a Notice of Allowance. If the Examiner believes a telephone conference would advance the prosecution of this application, the Examiner is invited to telephone the undersigned at the below-listed telephone number.

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers or any future reply, if appropriate. Please charge any additional fees or credit overpayment to Deposit Account No. 13-2725.

Respectfully submitted,

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